

**MAGNETIC FIELD REDUCTION IN NEAR-FIELD
BY HIGH IMPEDANCE ELEMENT**

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ABSTRACT

An apparatus and a method for reducing magnetic field in near-field by presenting high impedance at an operating frequency band are disclosed. A conducting element (112), which is suspended substantially parallel to a first side (104) of a printed circuit board (102) of a wireless portable communication device (100) over an electrically grounded conductor (116), forms a reactive element. The reactive element provides high impedance at operating frequencies of the wireless portable communication device and diverts radio frequency currents from the first side of the printed circuit board to the second side of the printed circuit board such that a magnetic field produced by the radio frequency currents on the first side of the printed circuit board is reduced in the near-field.